SUMMARY OF BERINGIA DAYS 1999 PRESENTATIONS

"Archaeological Testing at the Tuluqq Site: a Late Pleistocene Locality in Noatak National Preserve, Alaska"

When were North and South America settled? What was the role of the Bering Land Bridge in that settlement? Answers to these questions can be reached by focused studies of local sites; sites that are carbon dated to 11,000 years before present (BP).

The site we have been working on is called the Tuluqq site. It is located in Noatak National Preserve on Wrench Creek, a tributary of the Kelly River on a knoll with a good view along the creek. We set up a camp near the site for six weeks, and had 5—14 people working on the site. This year, we invited two Russian scientists to join us in the research at the site. Vladimir Pitulko, from St. Petersburg, has worked on similar sites in the Russian north. Dmitri Gerasimov also came from St. Petersburg.

What were the activities at this site and how were they related to other area sites? What were the dates of usage? What were the natural and human impacts to the site, for example frost? What information about past environments is present at the site today, such as plant remains and sediments? Information about this project is being shared with the public through presentations, journal articles and will soon be available on the Internet.

The Tuluqq site was discovered in 1998 with abundant surface artifacts of large well-made lancelet points. We found many items that were broken during manufacture instead of just finding a few finished tools. In 1998 a single meter square test pit was dug. Items were found 50 cm. below the surface, unusually deep for this area.We also found possible fire hearths. Two carbon dates of about 11,000 years BP were obtained.

This year, thirty meter square locations were excavated and 600 meter square grids were surface collected. From these locations, 472 tools were recovered and tens of thousands of chippings were collected. Two nearby chert quarries were visited. Raw materials were sampled for chert signatures. We also looked for human activities at the quarry that would tie in with the Tuluqq site. All of this material is currently being analyzed in the lab.

The major activity that took place at this site was tool production from large blocks of material brought to the site from the quarry. Large bi-faces and lancolate pieces were made. A large number of used and discarded projectile points were found. It was a tool repair site. Used points were replaced with good ones after nearby hunting occurred. Four radiocarbon dates have been determined; two in '98 and two in '99. Three clustered at 11,100 BP and one was at 7,950 +/- 40 years. An oxidized patch of soil indicates a possible fire pit or other human activity. Dates need to be verified; perhaps ancient wood was used for fire. We still need to associate dates with specific artifacts.

A paleoenvironmental study is getting underway. There is a tephra layer at about the 20 cm. mark. The pumice or glass fragments should date to the late Pleistocene or Holocene. This layer can serve as a chronological marker. More dates are needed and the site will be further tested. It is important to compare sites within a region to learn where people were traveling throughout the area. New technologies are becoming available to assist in analysis. Thermoluminescence will directly date an artifact rather than the associated carbon. Residues on artifacts will become important. Blood proteins can be studied. Current collections that exist in museums & universities will be reexamined. No single site will answer all of our questions, but a regional view will allow us to piece this compelling story together.

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"Results of the Feasibility Study for the Nature Park Beringia in Chukotka"

A number of the scientific research institutes from the Far Eastern Branch of the Russian Academy of Sciences (FEB RAS), particularly the Pacific Institute of Geography, conducted a feasibility study and prepared project design for the first nature park in Chukotka.

I. Several principles were used as a base for this design. 1) The principle of sustainable development of the territory: the essence of this principle is to use the land in such manner that preserves a sufficient natural resource potential and quality environment for future generations. 2) The principle of the significance of Chukotka as a part of "contact geographical structures" of Northeastern Asia. Each "contact structure" consists of two parts: land and coastal waters that are linked together. First of all Chukotka is surrounded on three sides by the ocean waters. Subsequently its coastal zone has a significant oceanic influence and its maritime zone is very closely connected to land in the historical and resource aspects. Secondly, Chukotka connects the large Arctic Ocean with the gigantic Pacific Basin. Finally, the largest continent Eurasia is almost connected through Chukotka with the North America across a quite narrow Bering Strait. 3) The principle of the necessity for preservation and development of the Native peoples' places of habitation during carrying out of any activity in Chukotka, which includes the establishment of the park. 4) The principle of consideration of Chukotka ecosystems conditions. Our research showed a low sustainability of Chukotka ecosystems to techno-genetical disturbances. 5) The principle of the national park becoming a harmonious part of the northern economics model. The northern economics model consists of three sectors: market, partial market, and sustained by the government. Market sector can work on its own potential and includes oil and non-ferrous metals mining, fishing industry, and reindeer herding. The partial market sector can to some extent work

on its own potential but is also supported by the government. It includes traditional types of activities—primarily subsistence by Native peoples, transportation systems, agricultural systems and energetic industry. The third sector can not be self-sufficient and should be completely supported by the government – this is social services sector.

Fig. 1. P. Baklanov, N. Malik-Selivanova, & J. Rasic

II. The main methods used for the feasibility study and the project design for the park are the following: cartographic (generation of different evaluation maps), zoning (division of the area into zones-regions with the similar natural and economic components), and computing (data processing, GIS, and etc.).

III. The following results were received. 1) A unique body of knowledge on the natural resources and economic activities was collected and summarized. 2) A complex evaluation was conducted for all components of ecosystems and maps were created. 3) A detailed evaluation of natural and resource potential was performed. 4) An evaluation of all existing types of economic activity and their influence on the environment was carried out. 5) A medical-geographical evaluation of the area was conducted and series of maps were created. Through the course of the project we compiled about 50 various maps for the Eastern Chukotka region. The last part of the project was to outline the functional zones for the area and to choose the interesting areas for the organization of the national park. We outlined 8 zones and divided some of them into two parts. For each zone the most effective and ecologically allowable types of economic activities were chosen. Based on all of the available information, 5 areas were selected that can form the nucleus for the future national park. The whole research showed the tendency for formation of radial-concentric territorial structures. The first concentric zone is an ocean shore. The second concentric zone is a near shore area where the majority of the settlements and economic activity are concentrated. Two or three concentric zones are located in the interior regions. The results of this project are already being applied in an existing regional park (Nature-Ethnic Park Beringia) that was created by and headed by Professor Zheleznov.

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"Planning Protected Areas in the Russian Far East – Problems, Issues, and Perspectives"

By the year 1997 there were 30 national parks in all Russia. It is planned to create 45 more by the year 2005. The Pacific Institute of Geography (PIG) is the leading institute for developing feasibility studies for the Russian Far East and North East. PIG participated in the project development for 5 Federal National parks and 4 international protected areas for Primorskiy Region. Starting from 1994, PIG was actively involved in the program for development of a Beringia Nature Park. The principles outlined by the Russia's law on especially protected nature areas are used as the basis for the development of national and nature parks. The main work stages are the following. a) Evaluation of preservation and recreation potential of the area. b) Socio-economic evaluation of the area. c) Detailed ecologo-educational and recreational characteristics of the area. d) Determination of the outside boundaries and internal zoning of the park lands. e) Evaluation of socio-economic influence, park organization, and measures for minimization of negative effect.

During the first stage of park planning, PIG carries out the detailed evaluation of environment, nature and resources potential, and current economic situations in the area. A great deal of attention is paid to the evaluation of biodiversity of ecosystems and single species, and how this biodiversity can withstand natural and anthropogenic processes. A lot of attention is given to the dynamics of natural changes in biodiversity.

During the second stage of planning the research is conducted in order to determine if the planning of a park is recommended from the standpoint of nature preservation and tourist-recreational activities. At this stage the optimal boundaries are determined and the economic results from the park establishment are evaluated. All gains and losses, especially for the local population are taken into consideration. When a nature park is developed on so-called ethnic lands the function of providing for the traditional way of life for the Native peoples on park lands is added to the standard functions. In the case of such a park two separate tasks need to be accomplished: providing for nature preservation and recreational use and for revival of ethnic and cultural unity of the Native population. In order to accomplish all these tasks, separate functional zones are set within a national or nature park. The zones usually have the following proportions: 20% of the total park area is zoned for strict preservation, 40 to 60% for regulated recreation, and 10% for administration and infrastructure. In case of a nature-ethnic park 30% of the land is allotted for traditional subsistence.

One example of PIG's work is a large national and international park in the basin of Hanka Lake, which straddles the border between Russia and China north of

Vladivostok. In regards to biodiversity this area is one of the most important in all of Northeast Asia. This area is an important stop for many bird species migrating from Southeast Asia to the Beringia region. The land around Hanka Lake is greatly developed. Anthropogenic load exceeds all critical limits. The local systems of protected lands (*zapovednik* on the Russian side and preserve on the Chinese side) do not provide adequate levels of preservation. PIG created maps for more than 150 bird species, 20 land animal species, and 30 plant species. The institute evaluated the area regarding its importance for biodiversity of surrounding lands. The stable and unstable zones were outlined and this was considered during the functional zoning of the preserve. In the plan for the international park, PIG proposed 14 functional zones with different types of nature management, for example such as strict preserve, limited recreation, limited logging, limited agricultural development, industrial development.

Sredne-Ussuriiskiy (Middle Ussuri) Park is an example of the planned ethnic park with strict preserve zone, zone of limited recreation, and subsistence zone for the local population with two ethnic villages. Planning for Sikhote-Alin'skii Biosphere Reserve is an example of a combination of different functions: tourist recreation and preservation of spruce-cedar and silver fir forests.

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"Learning Through Doing: Exhibits and Preservation by Community Members and Students in Deering, Point Hope and Provideniya"

Jensen:

This project is composed of two parts: conservation and education. Conservation of artifacts and educational outreach concerning the sites where the artifacts were found. We will give a workshop in Barrow on stabilizing and conserving archaeological artifacts. Students will be invited from Deering, Point Hope and Golovin. Randy Peterson, a noted Alaskan archaeologist from Minnesota will teach the workshop. Exhibit boxes are under construction. The first one in Deering is being conceptualized and designed. Earlier prototypes are being used that were developed in Barrow and Wrainwright.

In the summer of 1986, the U.S. Fish and Wildlife Service conducted a survey of an archaeological site. We learned from the elders and the Wainwright community was very interested. We went back to Wainwright in the winter and visited all of the school classrooms. We went back to Point Franklin in 1994 for three summers and got Wainwright involved in the project. Some community members worked at the site and we talked with a lot of people on how to bring the information back to the local residents. Wainwright is 27 miles away by boat or 4-wheeler from the site. Lab work was done in Wainwright for one season before the school had to be renovated in the summer. The lab was moved to Ilisagvik College in Barrow. Everyone wanted something more permanent than classroom or community visits and presentations. The villages had no museums, so traveling mobile display boxes were created to travel around Alaska and the world.

Fig. 2. R. Jones & A. Jensen

Randy Wise, a Wyoming state park ranger in summer and winter theater director in the winter built the exhibit boxes with sound chips embedded. They have a bi-fold case, handles, electric plug with tucked in cord and they fit into a shipping case. The leaflet holder can remain empty and the students can create their own leaflets. Different lesson plans and field trips can be organized around the boxes. They have been quite popular and are relatively inexpensive. The National Science Foundation paid for two boxes and the cases even traveled to their headquarters in Arlington, Virginia to go on exhibit. This project is taking the next step in display case development; that is, to train people in local communities on how to make their own cases with sound chips and what information to include in the exhibit with local commentators.

Randy will work with Deering and Point Hope to develop these local skills. Currently there are no written plans for these display boxes, but people have been expressing an interest and Randy could send out the plans to interested communities.

Rebecca Jones, 7th grade student in Deering:

Thanks to the National Park Service, Ukpeagvik Inupiat Corporation Foundation, and Pat Richardson, our teacher in Deering the past 16 years.

The first case for Deering will display photos of Deering and describe life in the village--our subsistence lifestyle. The photos will be taken by the photo class, the descriptions will be written in English class. The shop class will build the cases and we will wood-burn the Kotzebue Sound shoreline onto the box and show area villages. The case will first travel to a village in Montana then to sister villages in the region. The first case will be done by Christmas. The second case will display arts and crafts, and current and past life in Deering.

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"Meechkin: the Hope of Marine Mammal Hunters of Kresta Bay"

The main goal of this study was to research a Native camp in Kresta Bay (in the northern part of Anadyr' Gulf). In previous years the Native population of Kresta Bay resided in small camps along the northern coast of Anadyr' Gulf. Their main occupation was marine mammal hunting. Presently Natives reside in two villages: Uel'kal' and Konergino. Marine mammal hunting remains their main occupation and the basis for their economics, cultural and spiritual life. The hunters of Kresta Bay primary hunted for walrus. A large walrus haul-out was located at the western tip of an island, at Meechkin Spit. The Native hunters managed to procure a large amount of meat and at the same time kept the productivity of the haul-out stable.

It is known that the exploitation of northern land is an extensive nature use: that is an exploration of large areas with low biological productivity. The exploitation of Meechkin walrus haul-out is an exception and an example of an intensive nature use. A regular hunt for a large number of animals on a limited territory could cause fast disappearance of a haul-out. To prevent this the Native people were forced to invent the rules obligatory for all of them that allowed them to hunt and to preserve the haul-out at the same time.

The conducted socio-ecological project was aimed towards finding out the functions of the former camp, its organizational structure, and the preservation of the traditions in the modern ethnic environment. Seven Native people directly participated in the project, and the majority of the villagers from both settlements took part in different actions and surveys. It was found that young Eskimo and Chukchi currently have very poor notion of the principles of nature use that guided their ancestors. In the past the haul-out had a so-called "owner" who managed all walrus economy. The strict rules and social organization of the camp were phenomenal. During Soviet times the institute of the "owners" of the haul-outs was phased out because it was believed to be bad for the socialist way of life. The marine mammal hunt acquired an industrial character. A lot of meat was procured for fox farms so the hunt was very intensive (some years from 500 to 700 walrus were gunned down annually near the Meechkin haul-out). The haul-out would sometimes disappear, sometimes would restore itself.

The worst thing was that the Native people changed their attitude towards the walrus. In the past the hunters honored even the killed animal. During Soviet times they started to treat it just like a raw material--marketable goods. It is worse now because the economic situation in the villages is very difficult, and sale of walrus tusks is one of the available sources of money. The hunters became the main cause of danger to the existence of the haul-out.

This project was designed to try to revive interest in the walrus haul-out among the younger generation with the help of the elders. Several actions were organized. One of them was a drawing project. The children were asked to find out from their parents and grandparents all the aspects of life at the summer camp and hunt at the haul-out and then draw a picture of what they learned. It was an eye opener for the children--some of whom did know about the existence of this camp or had never been to the haul-out. The finished drawings were exhibited and judged by the elders. It was an interactive lesson. Later these drawing were exhibited at the Loussac Library in Anchorage and in Nome.

Another action was a showing of two films: *Animal Detectives* and another analogous French film, and public discussion about both of them. As a result of this discussion the inhabitants of Uel'kal' Village decided to create their own small Native company.

Now the inhabitants of both villages participate in new projects: 1) Ecological monitoring of walrus haul-outs of Anadyr' Gulf, and 2) "Remember the past, preserve the future" (educational project). Young Eskimo and Chukchi might not revive their old traditions immediately, but they understand that they cannot survive without the Meechkin haul-out.

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"Nature Beringia Park: a Strategy for the Development of Protected Areas in Chukotka in the 21st Century"

About 20 to 25 thousand years ago, the Chukotka and Seward Peninsulas were connected by the Bering Land Bridge. At that time it was one large joint ecosystem. Another 10 to 12 thousand years passed, and the waters of the Arctic and Pacific oceans covered the land bridge. After the large continent in the north of the Pacific was divided into two, a unique "land-sea" ecosystem was formed. This region and its joint natural and cultural heritage possess world significance. In order to protect this unique ecosystem several years ago it was proposed to create an International park. The American side planned to include in the International park four already existing park units – three in the Northwest Alaska and one on the Seward Peninsula. There were no comparable nature protective units on the Russian side.

The decision was made that the Pacific Institute of Geography and its branch in Chukotka should rework the project for the Russian side. In the initial stages of the project development, the basic concept used was the unity of all designated natural complexes. While the planning process was underway, a lot of variable difficulties were encountered. It was necessary to consider the growth of the main avenues of economic development and traditional types of subsistence: reindeer herding, marine mammal hunting, and gathering. It made the establishment of one common preservation status for the whole peninsula impracticable.

Considering the above, the development of the park project on the Russian side was concentrated on the solution of the following concrete tasks: ecological (preservation), economical, and social. The job was even more difficult because the appropriate methodology developed for the solution of these tasks practically did not exist in Russia.

In order to evaluate the natural conditions, the natural resources of the Chukotka Peninsula, to choose and determine the status of protected areas, and for future monitoring purposes it was necessary to create a series of multi-profiled maps with the same scale. These maps would help to develop the strategy for the selection of nature complexes with various preservation status, and with concrete regimes of functioning and subsistence. The first and main group of charts was geological, geomorphological, ecological, and landscape maps of all Chukotka Peninsula. The geomorphological map was the base for zoning of the whole peninsula. The overlaying of maps helped to determine the group of standard and unique nature complexes that should be included in the future Beringia International Park. The main task of these nature complexes is to provide for the natural existence of all types of ecosystems and harmonious preservation of biodiversity and gene pools of rare plant and animal species: polar bear, snow sheep, gray and Bowhead whale, and beluga.

The second group of maps contained social & ethno-cultural infrastructure of the Chukotskiy Peninsula. They included the burial grounds, ancient settlement & campsites, ethno-cultural monuments, & settlement-industrial complex. The third group included a series of medical and biological maps. Another rather important group of charts included preservation & recreational development maps that determined the recreational regime, functioning of nature complexes, different types of tourism and recreation, corresponding infrastructure of protected areas.

During the period of project development a group of scientists went though seven versions for the organization of the Russian part of the park. In September of 1999 the final version was completed. Overall there were outlined 5 nature complexes for the future international park: Kolyuchinskaya Bay, Chegitun, Mechigmenskiy, Senyavinskiy Archipelago, and Meechkin. The regimes of nature use for the outlined nature complexes are quite different, but at present they by no means limit the subsistence forms of economy.

The Chukotka Government established a new organization entitled the Department of Protected Areas and Wildlife. In the beginning of 1999, upon the initiative of the Governor, the area of Wrangel Island Preserve was increased and a special protective zone was formed around the main area. At present 15.39% of all Chukotka territory is included in the protected areas. When Beringia Park will be organized this number will go up to 23.5%. The organization of Pribrezhnyi *Zapovednik* (Reserve) in the south of Chukotka and El'gygytgynskiy or Central Chukotka Nature Park in the center of the peninsula are already included in the Russian Federation government plan for the development of Chukotka in 2000—2005.

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"Portrait of a Divided Maritime Family"

The Portrait Project, as it has come to be referred, was designed to be a contemporary artistic representation of three Siberian Yupik communities spanning the Bering Sea, a representative portion of a small population that share common bonds of family heritage and culture.

The project was designed to visually describe the contemporary daily lives and activities of Siberian Yupik family members living in Nome, Savoonga and New Chaplino, utilizing mediums of painting, drawing and photography. An extended family portrait, and international family album could be constructed and shared, and be a solid and meaningful contribution to all the communities.

The project was intended to demonstrate the disparity or similarity in experience between individuals of a Siberian Yupik population divided by the international border between Chukotka and Alaska. The project was a visual investigation to see if improvements were indeed experienced over the course of this last decade when the first friendship flight cultivated hope of improved living conditions for Russian Siberian Yupik people and the strengthening of family ties strained by the external pressures during the Cold War era.

The task was designed to be grassroots in nature, with the support and blessing of the participating individuals and communities. Permission was simultaneously requested from Native Corporations, IRA Councils, Elder Councils, City Councils and community members during the planning stages and prior to proceeding. This work was well underway before I realized that the academic field of visual anthropology existed and that the Portrait project might fall under its categorical umbrella. The project was not designed originally to be "scientific" in nature. I deliberately wanted to avoid and be disassociated from the potential pitfalls of pure "anthropological" research. This project was not for college credit, or a masters degree or to make money. This approach was baffling to community members. They kept asking "So, this stuff is coming back to us, and you aren't getting a degree, or really getting paid?' I think they were asking in a really polite, deferential way: "You're not the sharpest rock in the bag, are you?"

Images were taken for & intended for multiple purpose: first to stand alone & second, to function as support material for images to be created later in the studio. The use of color instead of black & white film was purposeful. Black and white images often engender a feeling of antiquity. Color images on the other hand provide a more contemporary felling, & tend, in my opinion, to not lock people in history. Color also has a way of bluntly revealing things that black & white images can more effectively mask.

Photos and paintings are relatively effective tools for cross-cultural communication; informing individuals of the purpose, scope reasoning for and meaning of the project

without needing individuals to speak the same language. All people are visual, no matter what their cultural background, origin or mother tongue.

Preliminary paintings and sketches have evolved into a kind of iconography, where images visually reference names, associated stories directly related to each individual, their history, what they chose to share, deliberately or by revealing themselves through humor, work, play and informal interviews. The breadth of personal information, stories, and feelings, individuals would choose to share, was vast. Knowing that it is impossible to present information without my own cultural, educational, gender bias as an outsider, I tried to utilize an artistic and anthropological approach as a "participant observer." The project has become a very personal intimate endeavor trying to translate conversations and stories being shared over tea into images.

I did, however, run into a fundamental unanticipated glitch! I did not realize that the project hinged on a single work. To my dismay, there was a huge cultural discrepancy between the non-Native "Lalurumka" & the Siberian Yupik translation of the word "family." What appeared to be a relatively focused & manageable project description became a very broad and fluid topic, including individuals who considered themselves family members by personal, political & clan affiliation, marital connection & by adoption as well as by blood. For this reason, a project originally scheduled to be a part-time endeavor of three to six months duration, has become a full-time, at least, three-year adventure.

A nearly comprehensive series of photographs of Savoonga elders has become a significant offshoot of the originally designed project. The template book is in the front hall for everyone to leaf through. The portrait images have contributed to or are scheduled to contribute to a number of publications including an Anchorage Daily News We Alaskans article, a True North magazine article, a video titled I Will Fight Until I Melt – Annie Alowa's testimony of United States Army generated pollution at Northeast Cape on St. Lawrence Island. These examples are also displayed in the front hall. The portrait project is scheduled to be reviewed in Cornell University's Journal of Indigenous Issues. And finally, Dick Russell, who recently traveled to Chukotka to research gray whales, has asked to use some of the photographs of elder hunters in his publication.

With permission of Savoonga elders, & at the request of a retired Savoonga school teacher, I was asked to photograph each Savoonga elder, so that their images could be permanently displayed in the local school. These photos have been enlarged, matted framed & will be placed in the school, following the exhibit tour. Each participating Alaska elder, to date, has been sent 6 or so smaller copies of their portrait. With relative success, Chukotka Siberian Yupik elders were included in this portion of the project & their photos are also included in the book.

Growth and expansion of the project is anticipated over the next few years. The project currently is in the stage of compilation, organization, construction of images and distribution to key people. This stage will culminate in the traveling exhibit that will be hosted in Nome, Savoonga, Provideniya and New Chaplino. The exhibit may also be shown in Sireniki if transportation is feasible. A location for exhibit space in Anchorage is being determined. By this time next year, I hope to have compiled and completed the publication of the exhibit. Anchorage community members and Siberian Yupik elders living here have requested that the exhibit be shown in Anchorage. And Sea Education Association has also requested that the exhibit be shown on their campus on the East Coast. The exhibit will be compiled into book form prior to the final distribution of original artwork to participating communities. Materials will be archived on computer disk to protect images that may otherwise be perishable over time.

Because the total population of Siberian Yupik people is relatively small and concentrated in a specific geographic area, it has been proposed to extend the Elder Project to include elders not yet photographed in order to form a visual essay of every single Siberian Yupik elder in the world. Recently, a Central Yupik elder attending a slide presentation at the Bering Sea Coalition International conference suggested that the Elder Project be extended to include every elder in the state of Alaska. Other native leaders have suggested doing a project that include Native elders on both sides of the Bering Sea.

There is a poignancy that accompanies the elder project. Half a dozen elders, Annie Aalowa, Hallie Kingeekuk, Floyd Martin, Oomringa, Gaimeeseen and Old Hunter, who all participated in the 1998 field portion of the project have passed away. The elder portion of the project for this reason exuded a certain urgency for completion and has taken priority to date in the processing of images.

Photos and copies of the We Alaskan publication have been prepared in packets for Chukotka elders & their families. I hope to send these home with Russian members of the Shared Beringian Heritage Program at the end of the conference. There are two hopes for the future of the project. First, tools used for the project are very simple; an AE-1 Canon Camera body, one wide-angle & an overlapping telephoto lens and various studio art supplies. Because of relative affordability & mastery of simple camera gear, I would like to see the Portrait Project continue on a community level. High school students could be provided with supplies, trained & be sent out on assignment to record and express their interpretation of life in their community. The project could proceed over time and give an even more comprehensive view of life in their native communities. This lifelong art skill is transferable. Perhaps in the long term, this training could provide a student with a viable livelihood that would directly benefit their community.

Secondly, the images produced with the on-going project overlap, and can offer potential contributions to many of the individual projects currently underway through the National Park Service's Beringia Program, as well as other national and international programs.

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"Golovin Heritage Field School"

The field school was held July 1-15, 1999 in Golovin. Supporters were the National Park Service, Kawerak, Inc., the Bering Straits Foundation, and the Olson School in Golovin. Students visited old village sites in Golovin Bay, Rocky Point and Cape Darby. The whole high school body of 10 participated. Owen Mason and Stacy MacIntosh participated from UAF, as did Ruth Kalerak from NPS. Ruth shared knowledge of her family from Rocky Point. Three Russians, Galina Povol'skih, Vasiliy Glagolev, Tatyana Makotrik visited from New Chaplino. Cathy Punook was the translator. Other villages in the area were invited, but due to logistics, they did not attend. We will work this winter to have them attend next summer. Thanks to the people at the Chauvik site for their hospitality at their fish camp.

Last summer three additional meter square test pits were excavated. The students screened and catalogued the artifacts. They also studied the wooden structure which dated to 1200-1400 years ago. In 1998 the material hinted at Ipiutak. In 1999 the material seems to be either Ipiutak or associated with Ipiutak. Cross sections of timber were taken and three other sites were visited. A large feature was tested at a Norton Period site.

A day was spent at an old reindeer processing facility. Whether it's a caribou drive or a beluga hunt, it's the same herding process. The community picnic was attended by half of the population. And an open house was held at the high school. Golovin would like NPS assistance on how to develop a school curriculum for the heritage field school.

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"American and Russian Exchange of Geographic Information"

We spent a week with the Pacific Institute of Geography discussing common GIS issues. The National Park Service and the Institute have common concerns and topics of study such as inventory and monitoring, development, cost of remote travel, working with indigenous groups. The working environment in the Russian Far East is similar to Alaska. The technology and software tools are also the same in both countries. We also use a common GIS language. Even the work produced is very compatible.

The GIS group is developing a project proposal. It will be a bite-sized next step towards working on GIS topics in the Beringia region.

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"Kamchatka Peninsula, a Regional Review of Nature Protected Area Systems and Perspectives for Recreational Development and Cooperation"

Kamchatka is a vast region. Its geographic location and natural and climatic conditions give it a special place among the regions of the Russian Far East. The Kamchatskiy Peninsula stretches from north to south for more than 930 miles. In its northern part the peninsula is attached to the Koryak Mountains and directly to Chukotskiy Peninsula. The zone of tundra and low marsh lands separate Kamchatka from the mainland that in turn impoverishes its nature. Many usual taiga species are absent in Kamchatka.

Kamchatka is an area of active volcanism. More than 30 active volcanoes are located on the peninsula. The largest one in all of Asia is Klyuchevskaya Sopka. The influence of volcanism on the formation of relief, soils, vegetation, distribution of ecological features, flora, and fauna is noticeable everywhere on the peninsula. The areas adjacent to the volcanoes that dominate the landscape are covered with lava flows or slack fields. Vegetation on the slopes of volcanoes is very limited and represented primarily by the creeping trees, shrubbery, and plants of mountain tundra associations. More often volcano slopes--especially in the areas of active volcanism--are lifeless.

The famous Geyser Valley located in the center of Kronotskiy *Zapovednik* (Reserve) is one of the world's most unique ecosystems formed around the thermal grounds and numerous geysers. This area is notable for its diversity of thermophilic vegetation.

Kamchatka's winters are very snowy. The pole of maximum snow cover on the peninsula is located in Kronotskiy *Zapovednik*. Sometimes the thickness of snow cover reaches 46 feet. The creeping forms of trees and shrubs are the method of adaptation to Kamchatka's snowy and long winter. The thick snow cover and lack of winter pastures historically predetermined the scarcity of caribou and undeveloped reindeer herding. At the same time the snowy winters and areas of glaciation determine the hydrological situation of the vast Kamchatka territory. The peninsula is one of the world's best places for spawning of all five species of Pacific salmon. The areas of abundant vegetation are located in river valleys with moist soils. The tall standing coniferous forests grow in limited areas, only along the Kamchatka River valley. The Kamchatka brown bear, the animal that defines the image of the peninsula's wildlife, primary lives in the basins of major spawning rivers. At present, more than 7500 thousand brown bear roam the peninsula.

The history of the protected areas in Kamchatka starts in the 19th century. In 1882 the Kamchatkan hunters came out with an initiative and addressed the czarist government to create a protected area around the Kronotskiy Lake for the restoration of the sable population. At present this protected area is greatly enlarged and extends three miles into marine waters along the coast of the peninsula. The Kronotskiy Biosphere *Zapovednik* is one of the largest in Siberia and the Russian Far East and is also one of the oldest. Other federally protected areas in Kamchatka are Komandorskiy *Zapovednik* and South Kamchatka Preserve. Just recently 3 new protected areas of a new type were created. These are regional nature parks: Bystrinskiy, Nalychevskiy, and South-Kamchatskiy. One of them, Bystrinskiy was created with the

consideration of the fact that the Native Even people traditionally used this land for subsistence. In addition, there are 16 regional preserves in Kamchatka that were created to protect the habitat of certain rare animal and plant species. At present, 27% of Kamchatka is included in some type of nature protective unit.

☎ Vladimir I. Mosolov can be reached at Kronotskiy Zapovednik (Elizovo, Kamchatka, Russia) (7)(41531)6-17-54 or zapoved@elrus.kamchatka.su

"Tracing of Prehistoric Contacts Between Alaska and the Chukotka Peninsula by Chert Sourcing and Fingerprinting"

We can trace prehistoric contacts between Alaska and Chukotka by identifying the source of chert artifacts and by geochemical fingerprinting of that material. What were the geological sources for prehistoric artifacts? What were the transportation routes between the sources and the artifact sites? The earliest movement in the area is approximately 11,000 BP (before present). There are a few sites on Chukotka that have been dated to 10-11,000 BP. Alaska has several such dated sites.

This research involved sampling chert outcroppings and selected artifacts. Trace element composition and specific mineral structures are being studied. This will result in a petrological and geochemical database of source and artifact material. Construction of maps showing a correlation between the sources and artifact sites will follow. Geological maps show chert outcrops mainly in the western Brooks Range, and none on the Seward Peninsula or south of the Noatak River.

Fig. 3. T. Birkedal (NPS) & N. Malik-Selivanova

Field work was completed in the Western Brooks Range in 1993-4. Three hundred artifacts were geochemically analyzed as were nine outcrops. Fifty percent of the artifacts were correlated with four of the outcrops, therefore these quarries are prehistoric. Wrench Creek is the closest quarry to the Chukchi Sea; it contains huge black chert – good material for tool making. The distribution was south to the coast, up the Kobuk River to Onion Portage. Now Chukotka artifacts will be studied.

To gather information, I went to Magadan and studied the Dikov collection. I looked through many boxes for chert artifacts. Sergei Slobodin helped to look through this large collection. I also went to the Museum of Oriental Art in Moscow to look through Mikhail Brunstein's collection from Cape Deznev. Then to S. Rudenko's very large collection in St. Petersberg. He was the first archaeologist in the Russian north.

Geologic maps and reports were studied in Moscow and Magadan. There are only two identified chert sources in Chukotka; one on Wrangel Island and the other along the north coast of the Chukchi Peninsula. It is rare to find chert in assemblages; it has been found in only 11 paleo-Eskimo sites near Naukan, Cape Chaplino and on Wrangel Island. In the Anadyr area (Ustbekha) quartz and obsidian are found, but rarely chert. Sireniki has some chert. Two good pieces from Naukan and Cape Chaplino were found. Source data will be completed by the end of November. Permission is needed to take samples from the two large Chukotka artifacts. I expect to get the samples next summer.

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"Traditional Knowledge and Use of Sea Birds on St. Lawrence Island and in Chukotka Villages"

I have been working on this project since 1996. Thanks to Ida Murdock of the NPS who assisted on the project, to our guide Bert Oozevuseuk on St. Lawrence Island, & to the people in the communities who shared their knowledge with us. The goal of the project was to survey the human dimension and nature of the seabird colonies. There is a sharing of resources and management and strategies of resource use. Counts were only conducted on St. Lawrence Island, not along the Russian coast. In 1996 the north coast of the island was surveyed; in 1997 the south side from Gambell to Punik Island was surveyed. The map showed the colony locations along the Russian coast without the names or colony counts.

The entire island wasn't surveyed; only certain counts were made. Aleutian terns were noted on the island, although locally it was known of their presence. The highest population species were the murres, & the least & crested auklets. The total breeding & nesting bird population on the island is 3,650,000.

The murre population seems to be steady with a increase in glaucous gulls and a decrease in cormorants. This was a one-time survey; repetitive surveys are needed to see trends, perhaps every 10 years. The 1997 harvest survey showed that around Gambell there were 16,000 birds and 5,000 eggs (mostly murre) were collected for food.

We didn't count swans, but there were a large number of nests on the south side of the island. We saw arctic fox

swimming out to offshore islands. They completely destroyed the nests and ate the eggs on these islands. There are sites where people have made camp for hundred of years to collect eggs. Gulls would hunt birds in the air. You can see the Chukotka coast from Gambell; it is only 40 miles away. The people, who are related, go back and forth between Chukotka and St. Lawrence Island. People in Gambell told us that both least and crested auklets have declined in the past 20 years.

Both sides observed bird die-offs, especially murres, but thought they would recover. It routinely happens. In 1997, murres and puffins washed up on the beaches. Samples were sent to the U.S. Fish and Wildlife Service for analysis, which showed starvation. That fall shearwaters also starved. On the Russian side, eiders and murres died off. Cranes and snipes perished because of a cold spring.

Ida Murdock worked on the human interest side of the project. She stayed in the villages and interviewed people. There were 34 questions on the interviews. Elders, hunters and homemakers were interviewed in Siberian Yupik. The tapes were transcribed and translated. The flora and fauna is similar on St. Lawrence Island and on the opposing Chukotka coast. Ida's sister Virginia helped with the interviews. In Savoonga people came to the house for the interviews. In Gambell, Ida and Virginia went into the field to do the interviews.

There is a common culture on both sides, such as dancing and wooden boat manufacture. We interviewed people in Provideniya, Sireniki, and New Chaplino. The Good Samaritan Purse from California had a school group in New Chaplino. Vera Panuage passed away in August of 1999. Elders can still be found that have the old style tattoos.

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"The Provideniya Museum and Eco-Cultural Tourism in Chukotka"

The Provideniya Museum of Regional Studies was organized by the local community in 1985. In 1989 it received the status of a state museum and was financed from the municipal budget. Originally the museum collection contained only two to three hundred items. At present the archeological, ethnographical, photo and document, Native applied art, and graphics and art collections exceed 14,000 objects. The museum also hosts a rather good herbarium of Chukotka and a small collection of peninsula minerals. The main goals of the museum are the collection and preservation of the objects and documents, their scientific study, and public education about the nature, history and culture of the region.

The main source for additional funds for the museum is the organization and participation in eco-cultural tourism. The museum staff started this activity in 1987 when Soviet tourists still came to Chukotka every summer. One of the tourist routes in those years was a marine round trip from Provideniya to Uelen with stops in Native villages. This was like a school of tourist business for museum workers. Beginning in 1988, a lot of active international cooperation took place between Provideniya and Alaska. When the border was open, foreign tourist companies got interested in organizing businesses in Chukotka. One of the first large companies that got involved was Society Expeditions. In the early 1990s', other companies, such as Quark Expeditions, Marine Expeditions, and Circumpolar Expeditions starting to develop their businesses in Chukotka.

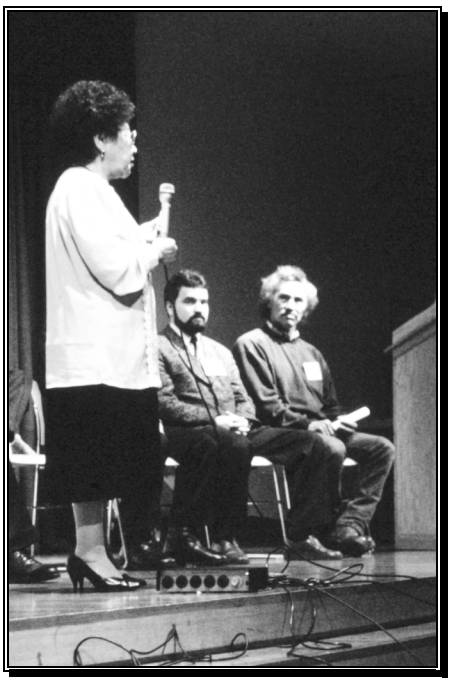

Fig. 4. E. Dobrieva, V. Bychkov, & I. Tanko

Tourists were welcomed in the Native villages. They were shown the most interesting things, provided with the maximum comfort possible, and treated to local delicacies and traditional dishes. Chukotka has a lot to offer: unique flora and fauna of the Arctic and Subarctic, hot springs, mountainous relief, multitude of bays, lagoons, and islands in the Bering Strait. From time immemorial, coastal Chukchi and Eskimo, representatives of the cultures of maritime hunters and reindeer Chukchi have resided in this region and preserved their centuries-old traditions. The most interesting places in Chukotka are the area of Sinyavin Strait with Whale Bone Alley on Yttygran Island, a marine bird rookery on Nunengan Island, hot springs in Gel'mimil' Lagoon, a seal haul-out in Aboleshev Bay, and a walrus haul-out, ancient settlements sites, and a bird rookery on Arakamchechen Island.

Tourists are always interested in visiting the Native villages, getting acquainted with the traditional way of life of marine mammal hunters, reindeer herders, and fishermen. An important element of eco-cultural tourism is that the local inhabitants do not change their life style for the tourists with the exception of the preparation of souvenirs and dances. While visiting and staying in the Native villages the

tourists can observe the subsistence land use and traditional life style of the indigenous peoples. The organizers of the tundra tours always hire Native guides and boat drivers. The locals are paid for the show of the elements of fishing and walrus hunting, for dance groups' performances, and for stays at the hunting huts and *yarangas*.

Unfortunately, during the last six years the flow of tourists to Chukotka has decreased quite a bit. In 1993 more than two thousand tourists visited Providenskiy Region, in 1999 there were only five hundred. The reasons for this are the lengthy process of getting the special permission required to visit the Chukotka Autonomous Region, the strictness of the border regime, and all kinds of restrictions on the visitation of the most interesting sites on the Chukotskiy Peninsula. All the necessary permissions are obtained from different organizations, and this makes the process even more complicated.

Beginning in 1997, the museum has participated in the joint project with the North Slope Barrow and the Alaska Region of the National Park Service. Within this project, the museum was tasked with expanding the exhibition of the items of material and spiritual culture of the Native peoples of Chukotka and with the compilation of a catalog of the items present in the museum collections. The catalog is finished and a Xerox copy of it can be obtained from the National Park Service.

☎ Vladimir Bychkov of Provideniya Municipal Museum (Provideniya, Chukotka, Russia) can be reached in Anchorage, AK at (907)277-7983

"Traditional Use of Natural Resources and Modern Problems of the Chukotka Yupik"

Chukotka and Alaska are like two sisters. (Lyudmila Ainana)

The Yupik Eskimo Society of Chukotka was formed in 1990. Its main goal, according to the regulations, is the preservation of traditional subsistence. Only this activity can help to save the culture & language of ethnic Yupik people. This is a very small nationality. About 1,400 Yupik live in the Chukotka Autonomous Region, & about 1,700 in all of Russia & the former Soviet States. At the present time, it is hard for large nationalities in Russia, and it is even more difficult for small nationalities. The marine mammal hunters became the only providers for the people on the whole Chukotka coast. They even help reindeer herders because historically these two areas of traditional subsistence, reindeer herding & marine mammal hunting were always knitted together. Since 1994, many hunters have not received their wages. At the same time, in the Chukotskiy and Providenskiy regions, a hunter that works for the joint project with the National Park Service & North Slope Barrow receives financial and technical support. These hunters serve as collectors of information on bio-resources. They conduct observations of all marine mammals & especially of Bowhead & gray whales. The information collected by the hunters & processed by the marine mammal specialists helped Chukotka to receive a quota for whale hunting at the International Whaling Commission. At present Russia has a quota for 5 Bowhead whales. Many Russian scientists & specialists in Moscow & Far East are interested in the collected data, at the same time it is pretty much ignored in the Chukotka Autonomous Region.

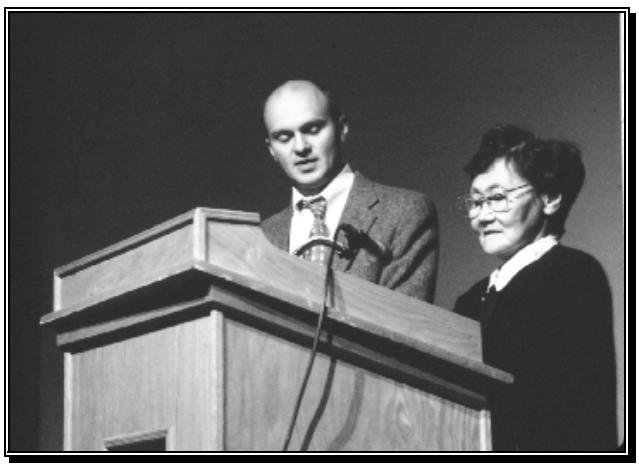

Fig. 5. J. Tichotsky (interpreter) & L. Ainana

The Yupik Society helps to transfer knowledge between the generations. During the summer time, hunters train the young people to hunt and women teach how to collect edible plants. The collected plants provide the vitamins that were used by Chukotka inhabitants for centuries. The Yupik Society together with Igor' Zagrebin prepared a book on edible plants that became a part of the series The Land of Eskimo. At present the work is under way on the preparation of a publication of a traditional subsistence dictionary. It will describe all tools, hunting gear, dog sledding equipment, and even dog names. Such famous hunters as Pyotr Typykhkak, late Timofey Panaug'e, as well as scientists linguist Nikolay Vakhtin and biologist Lyudmila Bogoslovskaya actively participate in the compilation of this dictionary.

The Yupik Society has its own office thanks to the help of the North Slope Barrow. It enables the society to conduct meetings, discussions, and host guests. For example, this office served as the headquarters for Charlie Johnson when he conducted a study of traditional knowledge of polar bear.

During the last year the Yupik Society experienced some difficulties. It was a sad time for the Society when a boating accident happened (August 4th, 1999) on the return trip of Novoe Chaplino people from St. Laurence Island. Coming home some boats got lost in a storm and two people died. The Society would like to express its greatest appreciation to the Alaskan rescue services that from the beginning participated in the search in Alaskan waters. After receiving permission to go in to Russian waters they found two other missing boats and saved 4 people from Sireniki who drifted for 5 days without food or water.

During the summer of 1999, the Yupik Eskimo Society of Chukotka was abolished according to the will of Chukotka Governor Nazarov. The district commission never informed the Society that the last re-registration day was

July 1st and transferred the case to the district arbitration court. By default the court liquidated the Society. The Eskimo people of Chukotka are now working on the organization of a new society that will be named the Yupik Society of Russia. It will be registered in Moscow at the Association of Small Nationalities of Russia and North.

☎ Lyudmila I. Ainana can be reached at the Yupik Eskimo Society of Chukotka (Provideniya, Chukotka, Russia) (7)(42735)2-21-72

"Slime Molds, Mushrooms, Lichens and Mosses of the Kobuk Valley National Park and Dunes"

Laursen:

This is a three-part program: circumpolar, central Alaska & Russia. We haven't been to Chukotka yet – we hope to get there next summer – but have worked in the Aleutian Islands & in Magadan. We would love to work in Kamchatka.

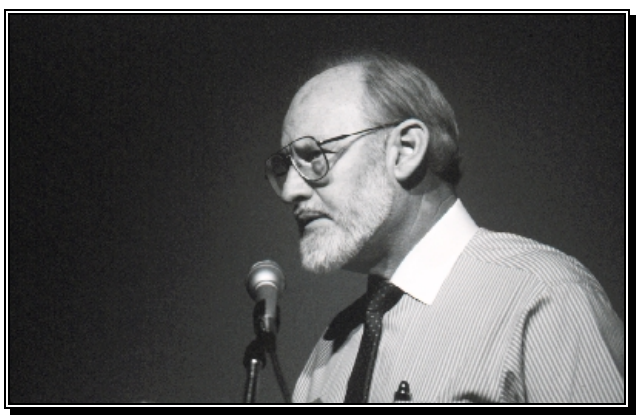

Fig. 6. G. Laursen

This summer we worked in the Great Kobuk Sand Dunes, which is an anomaly in the boreal forest. We have a computerized composite photo of the sand dunes and river that shows an area 10-12 miles long and 3-5 miles wide. The team is international with one Australian, one European, 5 Russians, and ten Americans. There are 12 research units (RU). Each team has its own focus: slime molds, mushrooms, lichen, mosses & liverworts, & vascular plants.

Setting up our camp involved hauling three tons of gear on 23 float plane flights. We landed on the Kobuk River near the mouth of Kavet Creek which drains from the dunes. We had tent platforms for a cook tent and science tent. The camp included a volunteer doctor. Our first guests were two toads so we knew toadstools couldn't be far away. We found blue-green algae that form relationships with lichen. Witches brooms are an indicator of stress on spruce trees. We gave a number or oral and visual presentations about the subsistence use of fungi. We wondered if maybe the missionaries stopped the native use of fungi? There seems to be an increased use of fungi by native peoples now.

The largest collection of Arctic & Sub Arctic fungi in the world is now at the University of Alaska in Fairbanks thanks to the NPS funding. We found 260 species, & 131 genera this season. There is a greater number of vascular plants in the Kobuk area than on the Seward Peninsula, & a greater number of genera. We found a new species for Alaska – a fungus found only in the Sand Dunes. A new find for Alaska is a true truffle. Coral fungi were abundant.

We had two people doing lichen research. One lichen fixes nitrogen, which is good for nitrogen-poor tundra soils. We found a new liverwort in Alaska. The previous known northern range was Vancouver, British Columbia.

Stephenson:

We found three groups of slime molds, microscopic organisms. One group is very small and not know to science until 1960. The first are protostelids. The second are Dictylstelids—there are 70 in the world, five in Beringia, and seven in Magadan (one new to science). The third group is Myxomycetes, 95 are known worldwide. We found 26 genera and 55 species in Beringia. In eastern Russia, a scientist from St. Petersburg has found 21 genera and 31 species in the Magadan area.

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"Development of a Naukan Eskimo Language Dictionary"

Krauss:

The Eskimo language is diverse and complex in Beringia. There are at least five Eskimo languages. The Naukan language is a link between Alaskan Yupik and Chukotka Yupik. The Naukan people were moved in 1958 to three sites—Laverntiya, Lorino and Uelen. Naukan was like a third Diomede Island. The Chaplinski, when traveling north, dragged their boats on the west side of Naukan and treated it like an island.

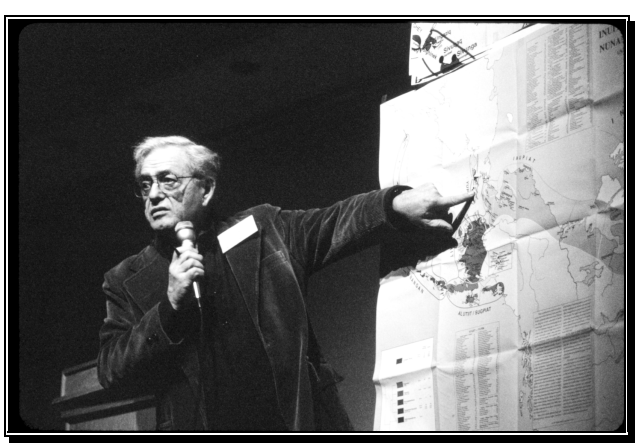

Fig. 7. M. Krauss

On the U.S. side, native languages have been suppressed since 1900. In the 1970's, the native languages were re-introduced in schools. On Saint Lawrence Island, the children still speak the language—the only place in the Beringia area where that is the case.

In the Soviet Union, native languages were allowed in the schools in the 20's and 30's. There were many (at least 100) Chaplinski books published—it is a very literary Eskimo language. This is the largest number of books per capita of any Russian minority. In 1958, Eskimo books were banned, and the language was forbidden in schools.

Dobrieva:

At present the work on the preparation of a Naukan Eskimo Language Dictionary is well underway. How did this work start? Many years ago the first grade teacher in Naukan passed out textbooks of the Eskimo language and read the text. Children could understand only a little. That was because the textbooks were written in the Chaplino Eskimo language and not in Naukan. The teacher needed to translate text for the children. People who prepared this book considered Naukan and Chaplino languages to be the same and did not understand their differences. Naukan and Chaplino languages are both Eskimo languages, but vary one from another like Russian from Ukrainian that are both East Slavic languages.

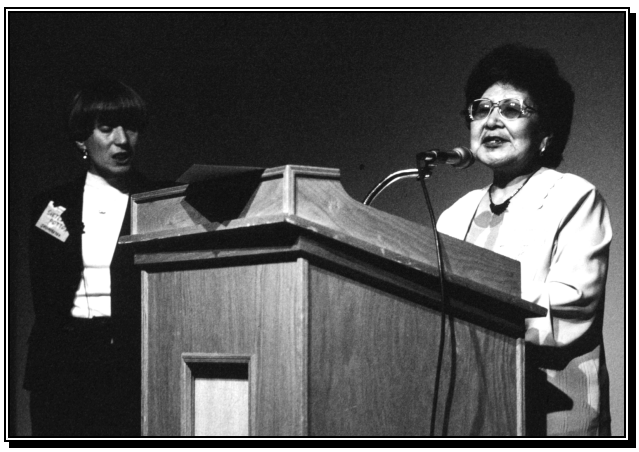

Fig. 8. S. Potton (interpreter) & E. Dobrieva

Two late Eskimo women, Izabella V. Akhtonova and Irina A. Leonova became the first collectors of information on the Naukan people: their words, habits, and ways. They both worked separately, but left a lot of manuscripts that are used now in the preparation of the Naukan Dictionary.

In the early 1990s' some of those manuscripts were transferred to Micheal Krauss. In May of 1995 Elizaveta Dobrieva came to Alaska for the first time to work on the dictionary, to prepare correct pronunciation, spelling and translation of the words. The education department of the Chukotskiy Region has a large collection of information on the traditions and customs of the Eskimo and Chukchi people. A creative working group of Eskimo teachers was formed at the department of education. The group started to invite elders that lived in Naukan and younger people that remember about life there from family stories. A lot of useful information was collected and recorded on audio tapes and videotapes. Valentina G. Leonova, daughter of Irina Leonova is the head of the creative group. The results of the joint work of the group were put together in a small book.

☎ Michael Krauss can be reached at the University of Alaska Fairbanks (Fairbanks, AK) 9907)474-6588 or ffmek@uaf.edu and Elizaveta A. Dobrieva of Lavrentiya, Chukotka, Russia can be reached throuhg M. Krauss

"Conserving Biodiversity in the Bering Sea"

The World Wildlife Fund (WWF) and others looked back at the history of conservation. Many battles were won, but we are losing the war on biodiversity. So, WWF identified the most important areas for conservation, and identified them as eco-regions. The Bering Sea is one of these eco-regions.

Eco-region based conservation involves work on a much larger scale. The Bering Sea region was defined this spring to include north of the Bering Strait. Important species are concentrated in a limited number of areas. The health of salmon depends on the health of the rivers where those fish spawn. The Bering Sea is important for fisheries and whaling. There are less than two million people in the Bering Sea eco-region, so human population pressures are low. Traditional subsistence is important part of any conservation effort.

The Stellar sea lion population has been reduced by 80 percent. There may be impacts of climate change—a plankton bloom in 1997 near the Pribilof Islands has never been seen so far north. The commercial fishing results in a large scale removal of biomass from the region.

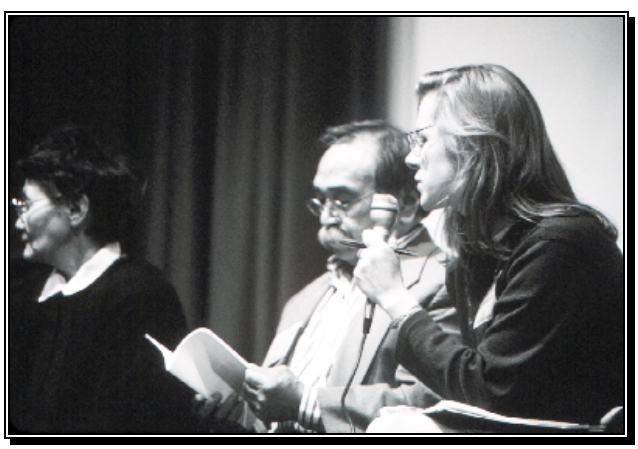

Fig. 9. L. Ainana, Ch. Johnson, & M. Williams

We conducted workshops in the United States, Russia and Japan. The Bering Sea was divided into subregions. Experts worked with each other in subregions to identify key areas (critical habitats). What are the threats to the Bering Sea eco-region? Warming, pollution, garbage, fishing

management (especially on the Russian side, and alien species (i.e., rats).

It is important to develop partnerships with local groups and students, and to do conservation outreach. WWF supports a local group in Anadyr. In Kamchatka, WWF helped to establish new conservation areas.

☎ Margaret Williams can be reached at the World Wildlife Fund (Washington, DC) (202)778-9573 or margaret.williams@wwfus.org

"Training Our Children in the Traditional Subsistence Use of Natural Resources"

Children of the north who do not know the experience of their ancestors will not have a future and will not possess enough strength to survive in the extreme conditions. At the present, the teaching of traditional subsistence to children is on the rise. It is mostly because of the economic situation in Russia and in particular Chukotka. The northerners try to teach their children to use nature rationally and to protect the flora and fauna of the north. It is done not only verbally--children often accompany their parents in tundra during the collection of edible plants and reindeer herding as well as in the ocean during the marine mammal hunting. Schools, kindergartens, different ecological groups, clubs, and the Naukan Cooperative are involved in the process of teaching children the basics of subsistence.

The Naukan Cooperative was organized in 1987. From the very first day children were its constant companions. They come not just out of curiosity but because they want to master the occupations of their fathers & forefathers. The Cooperative helps children because its main goals are the revival of marine mammal hunting, providing inhabitants of Lavrentiya with traditional foods, & teaching the local population, including children the culture of ecology.

Fig. 10. J. Meldrum (NPS) & M. Zelenskiy

The Naukan Cooperative has a number of rather good small vessels, motors, CB radios, darting guns, & other equipment & teaches children how to use it. It is always stressed: take from nature only what a human can consume & do not take anything extra. Children can experience all the rules in practice. All products obtained in the ocean are always brought to shore & divided between the villagers. This is one of the main subsistence rules.

When the hunters from Naukan Cooperative go in the ocean one can see that there is a child in every boat. They come not to be just deck help. The main purpose of their presence is to study the traditions of marine mammal hunting, to gain knowledge of the different mammal species, to become skilled at the rules of safe hunting, & to learn self-control in extreme situations. These skills will be of great use to these future professional hunters.

In order to attract children to the work of the Naukan Cooperative & the Association Naukagmit in 1998—1999, a school hunting brigade was formed thanks to the initiative of the Department of Education in Lavrentiya. The cooperative & association assigned experienced mentors to work with the brigade. In 1998 Nikolay Ettytegin from Naukan worked with children and in 1999 Boris Al'pyrgin from Naukagmit. Children who participate in the brigade also are able to earn money & help their families. During this process children learn a lot, they become determined and diligent, & get to know the character & soul of their people.

In 1999, children helped Boris Rentot and Evgeniy Ennvenchevin, the hunters from Cooperative Naukan to build a racing *baidara*. Children were very exited about this project. They made parts for the baidara, tied knots, stretched and sowed walrus skins. Young constructors found out about the techniques of building a traditional vessel. Considering the natural observance of Native children they will remember these studies for their whole life.

☎ Mikhail A. Zelenskiy can be reached at Naukan Native Cooperative (Lavrentiya, Chukotka, Russia) 2-26-69

"Collection of Polar Bear Habitat Use from Local Knowledge in Chukotka"

Johnson:

In 1989, the Russians wanted to share in the harvest of polar bears, as the population of bears had recovered in numbers. In Kotzebue in 1992, Alaska Natives told the U.S. Fish and Wildlife Service (FWS) that they wanted meaningful involvement in polar bear management and the setting of research goals. Alaska Natives formed the Alaska Nanook Comission in 1994, with the goal of establishing a native-to-native agreement with the native people of Chukotka. In 1997, the Nanook Commission negotiated a cooperative agreement with the FWS, and a year later another agreement with the National Park Service. The NPS agreement helped establish a relationship between the Alaska Nanook Commission and the Union of Marine Mammal Hunters in Chukotka. The two organizations developed a program for habitat use, and provided assistance with conservation education. An outcome of this collaboration will be a report compiling local knowledge about polar bears and polar bear harvest. The report should be completed by October 2001. Another will be posters

printed in Russian, which will urge protection for polar bears and provide information about polar bear treaties.

In March of 1999, the Nanook Commission met with the Union of Marine Mammal Hunters in Nome. A goal of the meeting was to provide technical assistance to the Union. In April of 1999, Susie Kalxdorff and I went to Provideniya. We trained coordinators, and explained the questionnaire they would use. We thank Vladimir Bychkov of the Provideniya Museum for his help. The maps we were using were old pre-World War II maps, but they were adequate for one village prototype. We will also use maps from Magadan, but we can not remove them from Russia, because of the scale of the maps. We can only take maps of 1:500,000 scale. When we were in Provideniya, we went to New Chaplino by vezdekhod. On our return the vezdekhod broke down and we had to walk for two hours to get back to Provideniya. Another two hunters came to Provideniya the next day by dog team. They had a very rich knowledge of polar bears. Ettylen and Tanko went by snow machine to Yanrakkinot. We planned to return to Chukotka in the fall but were unable to do so.

The development of the posters is progressing. The report on local knowledge will help us to determine the level of sustainable harvest for polar bears.

Tanko:

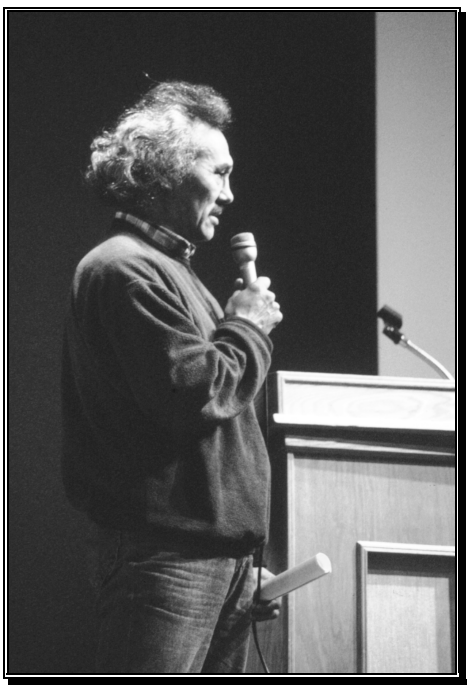

Fig. 11. I. Tanko

In 1999, the joint commission Umka—Nanuk conducted two months of collaborative work on the study of polar bear habitat use through the use of local knowledge. Vladimir Etylen is the leader of the project in Chukotka Region. Ivan Tanko is the coordinator in Providenskiy Region, Evgenii Sivsiv is the coordinator in Chukotskiy Region, and Vladilen Kauren is the coordinator in Iul'tinskiy Region. Due to the transportation difficulties Etylen was not able to find coordinators for the Chaunskiy & Shmidtovskiy regions. Susanne Kalxdorff of the U.S. Fish and Wildlife Service developed a methodology to collect information on polar bear from local populations. She and Charlie Johnson taught the coordinators how to apply this method in practice.

During the first two months of work (April and May 1999), twelve hunters including 6 active, 2 young, and 4 elders were interviewed in Providenskiy, Chukotskiy, and Iul'tinskiy regions. The two young hunters who were interviewed hunt on a regular basis near Yanrakynnot, on Arakamchechen Island, and in Penkigney Bay. They gave detailed information on where the bear dens are, the polar bear migration routes, and the areas of their feeding. The elders provided invaluable information on the use of polar bear meat, fat, and skins. For example, the reindeer Chukchi valued bear fat a lot because when it burns it gives light, does not smoke, and does not have offensive smell. The elders recalled that the skin of polar bear used to be used to sow knee pads for hunters. Hunters used the knee pads to crawl without noise to a seal. The polar bear skins were also used to transport *baidaras* and whale boats pulled by dog teams to the edge of shore ice.

For many years Chukotka hunters were not officially allowed to hunt polar bear. Through these years, the Native population developed a certain social apathy and disinterest in the problems related to their Native food resources. One of the elders from Nutepel'men village said: "A polar bear for us is not just meat and hide. It is a layer of culture and an element of our young generation's upbringing. When they prohibit us to hunt polar bear, then in fact they prohibit our culture, traditions, and customs".

☎ Charlie Johnson can be reached at Alaska Nanook Commission (Nome, AK) (907)443-5044 or at cjohnson@nook.net, Ivan Tanko of the Union of Marine Mammal Hunters (Provideniya, Chukotka, Russia) can be reached through Ch. Johnson

"Initial Efforts in Establishing 'Sister Park' Relationships Between Alaska National Parks and Russian Protected Areas"

I have made several trips to Chukotka, including two village information trips and one personal kayak trip to Sireniki. In my travels, I have found that local people have a high interest in cultural exchanges.

A "sister park" relationship is an opportunity for agency people to share common ideas, share in training, and have staff from two countries meet with each other. Earlier this year, others and I went to Lake Hanka (north of Vladivostok on the Russia-China border) to look at the operations of that *zapovednik* and to develop ways that we could work together. Private companies had donated equipment (outboard motors, computers, field gear) and the National Park Service facilitated the process of getting the material into Russia. Anatoliy Kachur talked earlier about Lake Hanka. It is a vast wetlands with some similarities to Everglades National Park, and it shares similar challenges. It

is a rich area for migratory birds, and an important breeding grounds.

Our site visit was to meet face-to-face, to develop friendships, and to see what the local challenges are. It was an initial effort to develop communications and relationships. We discussed biological studies, poaching, and other enforcement issues. We plan to continue to exchange programs and will communicate via the Internet. Earlier this summer, an ornithologist from Lake Hanka, Yuri Glushchenko, traveled to Alaska for a reciprocal visit. He met with staff and traveled to field areas in Gates of the Arctic National Park and Yukon-Charley Rivers National Preserve.

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"The Commander Islands and Some Environmental Issues"

The Commander Islands--Bering and Mednyi (Copper)--are one of the most important and interesting components of the Bering Sea ecosystem. They are located between Attu Island and the Kamchatka Peninsula. Vitus Bering discovered the Commander Islands in 1742 during the famous Second Kamchatka Expedition. Bering died on one of the islands and was buried there. After the discovery of the islands, they became an important hub for subsequent Russian expeditions that sailed on to discover and explore the Aleutian Islands and Alaska. Crews from the expeditions' vessels constantly stopped at the Commander Islands to spend winter. The important historical heritage of the exploration voyages is nine remaining structures constructed in the 19th century.

The Commander Islands are the only area in Russia that are a homeland for a small population of Aleuts. The islands are washed by the warm Kurosiva current that comes from the Sea of Japan that is why the ocean is free of ice around the Commanders all year round. During the last 20 years, Russian geologists discovered and inventoried several very active underwater volcanoes. This provides for the unique character of underwater biocenosis and abundant diversity of the biota. There is no other place in the North Pacific where one can see at the same time thousands and thousands of sea otters, large and diverse bird rookeries, and Steller sea lions. It is known that during the last 10 years the population of the sea lion in Alaskan waters decreased 80%. At the Commander Islands, the situation is quite the opposite. It is a very interesting fact that the sea lion rookeries are in very stable conditions and their population increases 3 to 5 % each year.

Almost 50 years ago some renowned Russian scientists started talking about the need for a special preservation status for the Commander Islands. With their help a 30-mile protective zone was designated in the waters around the islands. All commercial fishing is prohibited in these waters. This protects the feeding grounds for all marine mammal species. After long preparatory work, a *zapovednik* (preserve) was established in 1993 on the Commanders. This *zapovednik* was formed with consideration of the interests of the population of Native Aleuts. It was planned to allow Native hunting and fishing on some areas of the islands. The *Zapovednik* was going to provide working places for the local population, help to develop eco-tourism, and provide for safe types of economic activity.

During the last 10 years Russia underwent crucial political and social changes, and the people and *zapovednik* got into a quite difficult state of affairs. Now the situation became even more dangerous. Russian businessmen with the support of the Kamchatka Administration attempt to liquidate the unique protective marine zone around the Commander Islands and under the pretense of pseudo-scientific programs develop commercial fishing in these waters. If the reach and unique ecosystem around Commander Islands will be destroyed it will immediately have detrimental effect on all ecosystems of the Bering Sea.

☎ Vladimir Sevast'yanov can be reached at (250)743-6895 or seaotter@hotmail.com

"Preserving Our Cultural Heritage"

The Eskimo Heritage Project preserves our cultural heritage using modern technology. Specifically, we have 1) translated and transcribed an audio tape collection, 2) established a comprehensive database to assist in organization of, and access to that collection, and 3) are preserving and properly storing that collection.

As of July 1999, only 32 audio tapes remain to be translated and transcribed, thanks to the translators we have hired. We have completed a database for 403 field interviews, and are now doing the same for elders conference tapes. Our elders provide a wealth of information on subsistence, social economics, and medicinal uses.

In July 1997, we received a second funding from the NPS. We continued the translating and transcribing of tapes, entered the inventory into a database, protected the tapes by preservation and storage, and developed a distribution policy. The policy manual on use of the tapes is drafted.

In the third year of our project, we continued translating and transcribing, are completing the organization of our database, and want to facilitate interactions with Russia. We are on schedule for completion of this project and are now looking for ways to best work with Russia.

How are we preserving our heritage? Two years ago, we signed a cooperative agreement with the Bering Strait School District. We want to make the information from this tape collection available in a multi-media format. We will digitize tapes, videos, and slides. Once completed, we will develop curriculums for schools to be used in village schools.

We have been dealing with three languages and three dialects. We have completed 403 high priority field tapes, 339 elders conference tapes, and 248 elders advisory committee tapes. Some of the stories we collected date back to the 1800's.

The NPS Beringia project is helping us achieve our goals in the Eskimo Heritage Program.

☎ Branson Tungiyan can be reached at Kawerak, Inc. (Nome, AK) (907)443-4386

Fig. 12. Beringia Days 1999 participants: front row left to right: L. Ainana, N. Malik-Selivanova, B. Tungiyan, M. Williams, Ch. Johnson, E. Dobrieva, P. Baklanov, N. Zheleznov, M. Krauss; back row left to right: V. Mosolov, G. Laursen, J. Rasic, Stephenson, V. Sevast'yanov, I. Tanko, G. Smirnov, M. Zelenskiy, A. Kachur, V. Bychkov, S. McNeill

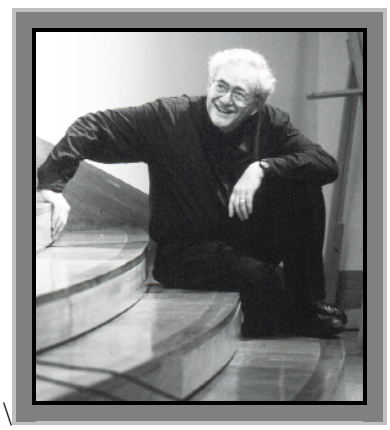

Fig. 13 It is fun to come to Beringia Days

Fig. 14. Bering Land Bridge 12—15,000 years ago

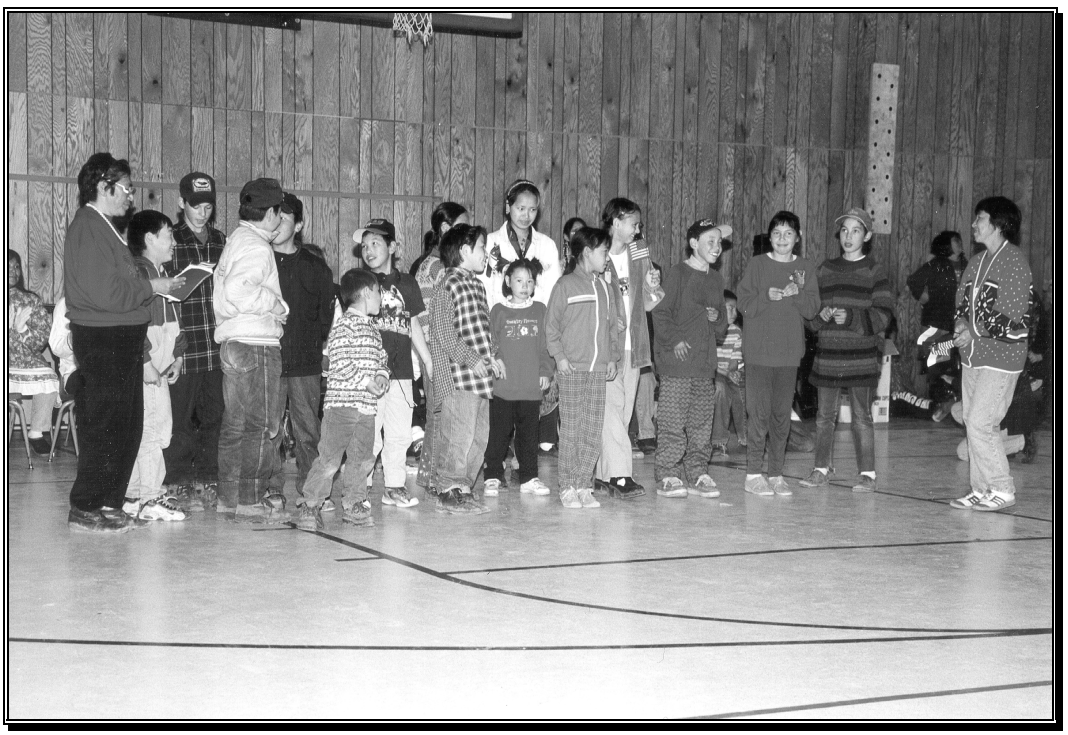

Fig. 15. A glimpse at Beringia Program 2000. Native children from Chukotskiy Peninsula in Savoonga (St. Lawrence Island) during language immersion program sponsored by the NPS Beringian Program.

Fig. 16. Strobe Talbott, Deputy Secretary of State, visited Savoonga, got acquainted with Beringian area, the NPS Shared Beringian Heritage Program and its projects, and had a chance to speak Russian with Native children from Chukotskiy Peninsula participating in language immersion program.

Fig. 17. Beringia is still a crossroads of continents, crossroads of the world. Photo by Vladimir Zhuravkov.

All other photos and maps in the issue are by NPS.